

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application. Please cancel claim 29, and amend claims 1 and 21. Claims 2, 9, 22 and 30 have been rewritten into independent form, claim 10 has been rewritten to depend on claim 9, and claims 31 and 32 have been rewritten to depend on claim 30.

Listing of Claims:

1. (amended) An apparatus, comprising a sensor and a bundle of optical fibers having first and second ends; wherein:

the bundle of optical fibers at the first end extends in a first fiber direction and defines a first section plane that is normal to the first fiber direction;

the first end defines a first end plane that is obliquely oriented with respect to the first section plane;

the bundle of optical fibers at the second end extends in a second fiber direction and defines a second section plane that is normal to the second fiber direction;

the second end defines a second end plane that is obliquely oriented with respect to the second section plane;

the first and second end planes intersect at an intersection line;

an orthogonal plane is defined orthogonal to a fiber direction of the bundle of optical fibers;

the orthogonal plane intersects the intersection line at only one point; and

the sensor is disposed in a confronting relation with the second end.

2. (rewritten into independent form) [The] An apparatus of claim 1 comprising a sensor and a bundle of optical fibers having first and second ends, wherein:

the bundle of optical fibers at the first end extends in a first fiber direction and defines a first section plane that is normal to the first fiber direction;

the first end defines a first end plane that is obliquely oriented with respect to the first section plane;

the bundle of optical fibers at the second end extends in a second fiber direction and defines a second section plane that is normal to the second fiber direction;

the second end defines a second end plane that is obliquely oriented with respect to the second section plane;

the sensor is disposed in a confronting relation with the second end;

the bundle of optical fibers is shaped to define a first angle between the first end plane and the first section plane;

the bundle of optical fibers is shaped to further define a second angle between the second end plane and the second section plane;

the first angle renders the apparatus capable of compressing in a first image direction an optical image impinging on the first end into an optical image in the bundle of optical fibers at the first section plane;

the second angle renders the apparatus capable of expanding in a second image direction an optical image from the bundle of optical fibers at the second section plane into an optical image emitting from the second end; and

the second image direction is transverse to the first image direction.

3. (original) The apparatus of claim 2, wherein the compression in the first image direction is between 10:1 and $m:1$, where $1 < m < 10$.

4. (original) The apparatus of claim 2, wherein the compression in the first image direction is between 4:1 and 1.5:1.

5. (original) The apparatus of claim 2, wherein the compression in the first image direction is 4:1.

6. (original) The apparatus of claim 2, wherein the expansion in the second image direction is between 1:10 and $1:n$, where $1 < n < 10$.

7. (original) The apparatus of claim 2, wherein the expansion in the second image direction is between 1:4 and 1:1.5.

8. (original) The apparatus of claim 2, wherein the expansion in the second image direction is 1:4.

9. (rewritten into independent form) [The] An apparatus of claim 1 comprising a sensor and a bundle of optical fibers having first and second ends, wherein:

the bundle of optical fibers at the first end extends in a first fiber direction and defines a first section plane that is normal to the first fiber direction;

the first end defines a first end plane that is obliquely oriented with respect to the first section plane;

the bundle of optical fibers at the second end extends in a second fiber direction and defines a second section plane that is normal to the second fiber direction;

the second end defines a second end plane that is obliquely oriented with respect to the second section plane;

the sensor is disposed in a confronting relation with the second end;

the first end plane intersects the second section plane at a first line;

the second end plane intersects the second section plane at a second line; and

the first line is transverse to the second line.

10. (rewritten into a form dependent on claim 9) The apparatus of claim [1] 9, wherein[:]

the first end plane intersects the second section plane at a first line;

the second end plane intersects the second section plane at a second line; and

the first line is perpendicular to the second line.

11. (original) The apparatus of claim 1, wherein the first fiber direction and the second fiber direction are co-parallel.

12. (original) The apparatus of claim 1, wherein the sensor is a time delay and integrate sensor.

13. (original) The apparatus of claim 1, further comprising a scintillator disposed in a confronting relation with the first end.

14. (original) The apparatus of claim 13, wherein the first fiber direction and the second fiber direction are co-parallel.

15. (original) The apparatus of claim 13, wherein the sensor is a time delay and integrate sensor.

16. (original) The apparatus of claim 1, further comprising a radiation source disposed in a confronting relation with the first end of the bundle of optical fibers.

17. (original) The apparatus of claim 16, further comprising a scintillator disposed in a confronting relation with the first end of the bundle of optical fibers, wherein the radiation source is an x-ray source.

18. (original) The apparatus of claim 16, wherein:
the sensor is a time delay and integrate sensor with a sensor control; and
the sensor control is capable of operating the sensor to image an article disposed between the radiation source and the first end of the bundle of optical fibers that is moving relative and transverse to a radiation axis between the radiation source and the first end of the bundle of optical fibers.

19. (original) The apparatus of claim 18, further comprising a scintillator disposed in a confronting relation with the first end of the bundle of optical fibers, wherein the radiation source is an x-ray source.

20. (original) The apparatus of claim 18, wherein the time delay and integrate sensor is a CCD photodiode array.

21. (amended) [The] An apparatus of claim 1 comprising a sensor and a bundle of optical fibers having first and second ends, wherein:

the bundle of optical fibers at the first end extends in a first fiber direction and defines a first section plane that is normal to the first fiber direction;

the first end defines a first end plane that is obliquely oriented with respect to the first section plane;

the bundle of optical fibers at the second end extends in a second fiber direction and defines a second section plane that is normal to the second fiber direction;

the second end defines a second end plane that is obliquely oriented with respect to the second section plane;

the sensor is disposed in a confronting relation with the second end; and

the bundle of optical fibers is capable of morphing a first rectangular format image at the first end into a second rectangular format image at the second end, the first rectangular format image having an aspect ratio different than an aspect ratio of the second rectangular format image.

22. (rewritten into independent form) [The] An apparatus of claim 21 comprising a sensor and a bundle of optical fibers having first and second ends, wherein:

the bundle of optical fibers at the first end extends in a first fiber direction and defines a first section plane that is normal to the first fiber direction;

the first end defines a first end plane that is obliquely oriented with respect to the first section plane;

the bundle of optical fibers at the second end extends in a second fiber direction and defines a second section plane that is normal to the second fiber direction;

the second end defines a second end plane that is obliquely oriented with respect to the second section plane;

the sensor is disposed in a confronting relation with the second end; and

the bundle of optical fibers is capable of morphing a first format at the first end into a second format at the second end, characterized in that when [the] a compression ratio equals [the] an expansion ratio, the area of the first format equals the area of the second format, but shape of the first format and the shape of the second format are different.

23. (original) The apparatus of claim 21, wherein the first end defines a first end plane and the second end defines a second end plane which is obliquely oriented with respect to the first end plane.

24. (original) The apparatus of claim 21, wherein the sensor is a time delay and integrate sensor.

25. (original) The apparatus of claim 21, further comprising a scintillator disposed in a confronting relation with the first end.

26. (previously amended) The apparatus of claim 25, wherein the sensor is a time delay and integrate sensor.

27. (original) The apparatus of claim 26, wherein:

the first end is non-normal to a fiber direction at the first end; and

the second end is non-normal to a fiber direction at the second end.

28. (original) The apparatus of claim 26, wherein the first end is defined by a first end plane and the second end is defined by a second end plane which is obliquely oriented with respect to the first end plane.

29. (cancelled)

30. (rewritten into independent form) [The] An apparatus of claim 29 comprising:
a radiation generator for generating incident radiation;

a scintillator disposed in a confronting relation with the radiation generator and formed of a material capable of transforming the incident radiation into a visible light image;

a fiber optic bundle having a first end disposed in a confronting relation with the scintillator and finished along a plane oriented with respect to a first end fiber direction to compress the visible light image in a first image direction, the fiber optic bundle also having a second end finished along another plane oriented with respect to a second end fiber direction to expand the visible light image in a second image direction, and the fiber optic bundle further having a transmitting region disposed between the first end and the second end, wherein the first image direction is transverse to the second image direction;

a time delay and integrate sensor disposed in confronting relation with the second end; and

a display coupled to the time delay and integrate sensor.

31. (rewritten into a form dependent on claim 30) The apparatus of claim [29] 30, wherein the first image direction is orthogonal to the second image direction.

32. (rewritten into a form dependent on claim 30) The apparatus of claim [29] 30, wherein:

the first end defines a first end plane;

the second end defines a second end plane; and

the second end plane is oblique with respect to the first end plane.

33. – 36. (previously cancelled)